^{168}Ir α decay (220 ms) 2009Ha42,1996Pa01,1982De11

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen[#]	NDS 147, 1 (2018)	30-Nov-2017

Parent: ^{168}Ir: E=0.0; $T_{1/2}$=220 ms *+60−40*; Q(α)=6381 *9*; %α decay≈100.0

^{168}Ir-$T_{1/2}$: From ^{168}Ir Adopted Levels (2010Ba27), where value is taken from 2009Ha42 measurement. Other: 125 ms *40* (1996Pa01).

^{168}Ir-J^{π}: (2^-) assigned in 2017Au03.

^{168}Ir-Q(α): From 2017Wa10.

^{168}Ir-%α decay: No experimentally measured value is available. %α≈100 assumed.

2009Ha42: ^{168}Ir source from α decay of ^{172}Au source produced in ^{96}Ru(^{78}Kr,pn) at E=342, 348 MeV. ^{78}Kr beam bombarded a 96% enriched self-supporting 0.50 mg/cm^2 ^{96}Ru target. A 50 μg/cm^2 Carbon foil was placed downstream the beam. Experiments performed at JYFL facility. γ-rays were detected with the JUROGAM γ-ray detection system that consists of 43 EUROGAM escape-suppressed HPGe crystals. Two DSSDs of the GREAT spectrometer at the focal plane of RITU were used to detect the fusion-evaporation products. RITU also contains MWPC, segmented planar Ge, and a HPGe clover detectors. Measured Eγ, Iγ, $\gamma(\theta)$, Eα, $\alpha\gamma$ coin, (recoil)α, (recoil)$\alpha\gamma$ coin, half-lives, α decay branching ratios.

1996Pa01: ^{168}Ir source from ^{112}Sn(^{58}Ni,X) at E=297 MeV (1996Pa01).

1982De11,1978Ca11: Sources from ^{108}Cd(^{63}Cu,3n) (E(^{63}Cu)=280-320 MeV, enriched targets (67.84%), helium-jet transport); measured Eα (silicon surface-barrier detector).

^{164}Re Levels

E(level)	$T_{1/2}$	Comments
0.0	0.70 s *16*	$T_{1/2}$: from Adopted Levels.

α radiations

Eα	E(level)	Comments
6230 *10*	0.0	Eα: from 2009Ha42. Others: 6258 *5* (1982De11), 6227 *15* (1996Pa01), 6220 *20* (1978Ca11). 1996Pa01 point out that the α line is very weak and that the assignment to ^{168}Ir decay is tentative due to poor statistics.